How to make Digital Stories using
iMovie HD in Apple's iLife '06.
Tutorial notes by Daniel Meadows

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1. Digital Storytelling, an Introduction

Digital Stories are short, personal, multimedia tales, told from the heart. Made on the kitchen table they have an aesthetic all their own which I think of as "scrapbook television". To make a Digital Story you need a computer:

> *either* a Windows multimedia PC, one with a Firewire port, 1GB RAM, a non-linear video editing package like Adobe Premiere, and Photoshop Elements)…

> *or* an Apple Mac. Any new Mac will do, they all come loaded with iLife '06, a fully integrated editing, picture handling and DVD authoring package. A Mac works straight out of the box.

You'll also need some photographs and a scanner. An in/out Digital Video (DV) camera is useful and/or a professional quality microphone and the means to make it work with your computer (see 6.i) below.

Most of all, though, you'll need a story.

Anyone who has access to the tools can make Digital Stories and publish them on screens anywhere. They have the potential to be a very democratic kind of storytelling.

> "Tools are intrinsic to social relationships. An individual relates himself in action to his society through the use of tools that he actively masters, or by which he is passively acted upon. To the degree that he masters his tools he can invest the world with his meaning; to the degree that he is mastered by his tools, the shape of the tool determines his own self-image. Convivial tools are those which give each person who uses them the greatest opportunity to enrich the environment with the fruits of his or her vision."
>
> Ivan Illich, 1975, *Tools for Conviviality*. London: Fontana

There's a strictness to the construction of a Digital Story: 250 words, a dozen or so pictures, and two minutes is about the right length. These strictures make for elegance. In this respect Digital Stories are a bit like sonnets, multimedia sonnets from the people.

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2. Introduction to iMovie HD

iMovie HD is Apple's entry-level non-linear video editing software. It is part of the iLife '06 package of software that comes bundled with all AppleMac computers made

in 2006. The "HD" stands for "High Definition" which means that it can be used to edit footage created in a High Definition Digital Video camera. (Not something that need concern Digital Storytellers.) iMovie HD is an Apple-only application, it does not exist in a Windows PC version.

For experienced users of industry-standard non-linear video editing tools (such as Avid, Premiere or Final Cut Pro), iMovie HD with its distinctly "non" non-linear tendencies—particularly in the way that it handles still photographs—is, at first, a frustrating programme. However, if you are *new* to editing video in a computer and have no experience of the traditional workflow, then iMovie HD is an attractive option, not least because it is affordable. It also out-performs by a long way all the other budget (e.g. Pinnacle Studio 8) or bundled (e.g. Movie Maker 2) Windows PC video editing tools and has many endearing qualities. Absolutely the *best* thing about working with iMovie HD is that it operates inside an AppleMac, a computer designed for multimedia use. This means that you have no need to worry about whether your computer has "got it all together". (Does it have the right sound card? a compatible capture card? enough RAM? a Firewire port? the right scanner driver? All that stuff… forget it.) If your Mac is running on OS X Panther (10.3.6 or later) or OS X Tiger (10.4.0 or later), then iMovie HD just works.

This guide is not intended to be an authoritative iMovie HD manual, rather it shows how you can use iMovie HD to make Digital Stories. If you want a fuller guide then please consult the help pages (from within iMovie HD go HELP > iMOVIE HD GETTING STARTED) which come with iMovie HD (a 47 page .pdf file). For a comprehensive guide to iLife '06 (397 pages in a book) *The Macintosh iLife '06* by Jim Heid (Peachpit Press, 2006) is probably the best. There are also some very good online tutorial movies at: http://www.apple.com/ilife/tutorials/.

When you make a Digital Story, most of your time is spent in preparation, gathering your assets, of which the script is by far the most important part. So don't even bother booting up iMovie HD until you've written a script, assembled your pictures (including video clips if you have any), and recorded your voice-over.

Remember, iMovie HD doesn't make your story. You make your story.

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3. Script Writing

Here are some pointers to help you in the writing of your script.

i. <u>A script is more than just words</u>: A Digital Story makes frequent use of the word "I" and its narrative is revealed in both pictures and words.

ii. <u>A great script doesn't always make a great voice-over</u>: Although carefully scripted, a voice-over is written to be spoken. No one listening can see spelling errors or bad grammar so write it as you would speak it, it's not an address or a lecture. Your voice is unique and its sound is important to the meaning of your story. The voice-over is not just words, it's about the way you speak those words. You are not an announcer

merely performing lines. You are narrating the story as you would tell it to a friend. If you "posh it up" or use a manner of speaking which is not your own, you will spoil it. Be yourself.

> "But no one is just like anybody else. No one, in fact is even who he or she was ever supposed to be. No one was supposed to step out from their fellows and stand alone to say their piece, to thrill those who stand and listen with the notion that they, too, might have a voice, to shame those who stand and listen because they lack the courage to do more than that.."
>
> Greil Marcus, 2001, "American Folk" in *Granta 76: Music*, London: Granta.

iii. <u>The precise word count is less important than the rhythm with which the words are delivered</u>: For a story of two minutes, the script should be about 250 words long. Be aware, though, that most Digital Stories benefit from pauses, gaps in the voice-over where the pictures are allowed to carry the narrative by themselves. It can also be useful to vary the pace of your delivery—slower bits and faster bits.

iv. <u>In a two minute piece there is plenty of time to lose your way</u>: A story is like a journey and it is very easy to set off in the right direction and yet never reach your destination. When you get to the end you should be able—as it were—to look back over your shoulder and still see the place you set out from. So, while you are writing, keep asking yourself: "What is my story about?" Do not include anything which dilutes the story's intention.

v. <u>Think how *few* words and pictures you need to tell the story, not how many</u>: There is never any need to describe what the viewer can already see, or *vice versa*.

For example: let's say your story includes a colour picture of a stylish middle-aged woman with a big smile and bright orange hair. She is standing in a kitchen and, though smartly dressed, she wears an apron. On the table in front of her is a rolling pin and a lump of dough. Unedited, your voice-over might read: "My grandmother was very stylish. She took a great pride in what she wore even though she was always in the kitchen baking. She had a trim figure and dyed her grey hair bright orange. She had a wonderful laugh and always smelt expensive." (A total of 44 words).

Edited to remove detail which can be gleaned from the picture, the passage might read: "My grandmother had a wonderful laugh and always smelt expensive." (Just 10 words, a saving of 34 words). The point here is that it is only necessary to tell us things that we cannot work out for ourselves and, even then, only things which keep the story moving on. Always leave room for the viewer's imagination to do some of the work.

vi. <u>And finally</u>: Remember—there are no right or wrong ways of telling a story, only clear ways.

4. File Discipline

When you switch on your computer it is vital that you begin by creating a master folder where you can gather your multimedia assets.

On the desktop you will find a folder called "Local Folder". This is where you must store all your assets. Do not store any assets "loose" on the desktop because these JOMEC **MacBooks are configured to delete files from the desktop every time they are shut down**. So get used to using the Local Folder. Double click on its icon to open it. Now create a new folder for storing your stuff: hold down the Apple and shift keys (in that order) and hit N; a new, empty folder appears. Type a name for it: "Firstname_FAMILYNAME". Double-click the folder and, inside it, create four new folders named: "sized_pictures", "voice-over", "video", and "soundtrack". This is your "named" folder on the desktop, it is your special place in the computer.
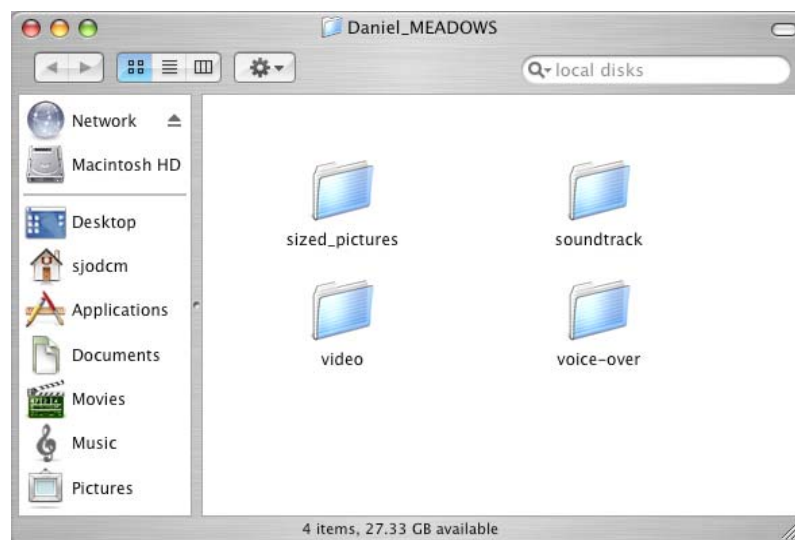
5. Recording a Voice-over

i. <u>Hardware</u>: We make use of the facilities in the ISDN recording studio in the Radio Suite (Bute rm. 0.21). To gain access see one of the technicians. Put your MacBook on the desk under the microphone and, using a minijack-to-minijack cable, connect your computer to the "phones" socket on the mixer desk via the "line-in" socket on the l-h side of your computer (identified by a graphic which looks something like this ▶O◀). Sit with the microphone a few inches in front of your mouth. Turn your MacBook on.

ii. <u>Software</u>: Although iLife '06 comes with GarageBand, its own audio recording software, this is essentially for mixing and editing music tracks. Far more straight forward for voice-recording and editing is Sound Studio from Felt Tip Software at http://www.feltip.com. This is the perfect software for audio novices because it is

simple-to-use and allows for high-quality recordings. JOMEC's MacBooks all have Sound Studio 2.2.4 installed.

iii. <u>Recording with Sound Studio 2.2.4</u>: Make sure the power switch on the mixer desk is switched on and the red "Phantom" light is on. Open Sound Studio from the MacBook's dock. In the menubar go to SOUND STUDIO > SOUND STUDIO PREFERENCES. In the "Input" section choose the line-in microphone you are using ("built-in Input") and then close the Sound Studio Preferences window (click the red button top left of the window).

Now:

a) Select AUDIO > CHANGE SAMPLE RATE from the menubar. When the dialogue box opens, select a sample rate of 48,000 hertz and click OK. 48,000 hertz (or 48 gigahertz) is the sample rate that is used by a DV camera. So, if you were to shoot any video for inclusion in your story then the audio you record should match it. If sample rates conflict then you will get nasty clicks and pops.

b) Again select AUDIO from the menubar and this time click on MIXDOWN TO MONO. This is because you are using a mono microphone. (A stereo microphone delivers two channels of audio to edit. A mono microphone delivers a single channel.) Do a FILE > SAVE and give your recording a name, e.g. "name_voice-over" and, in the "File Format" selection box, choose Wave Audio (a ".wav" file). Wave is the most common form of audio file. We use it because it can be read across platforms (that is, it will open in Windows as well as in a Mac). If you are confident that you will never want to use this audio file in any computer other than a Mac, then you can save it as a ".aif". Put this audio file in the "voice-over" folder of your named folder inside the Local Folder on the desktop.

c) Plug your headphones' jackplug into the computer's headphone socket (next to the microphone socket). Mostly we do not want to wear our headphones while recording because of the distraction of having to listen to ourselves while we speak. But it's a good idea to have your headphones plugged in and ready so that you can put them on quickly in order to listen to the playback.

d) Two windows should be open on the desktop: a Timeline window called "name_voice-over.wav", and a smaller one called "Input Levels". (If the Input Levels window is not open, go WINDOW > INPUT LEVELS.) In the Input Levels window you should leave the "play-thu" buttons unchecked.

e) Turn your attention to the mixer desk. Locate the controls which you need to use in order to set the correct volume levels. They are: "DJ Mic" slide—set it nearly to the top; "Input Gain" knob—set it to 2; "Headphone" sliders (two of them at the bottom r-h corner of the mixer desk, work them together as a pair)—set them both to 10; "Phones" level knob—set it at 1.

f) Now start speaking into the microphone and, on the computer, notice that a double band of blue flickers in the Input window. When you speak louder or get closer to the microphone, the blue expands first into a green zone, then a yellow zone and finally into a red zone. Try to position yourself so that, when using your normal speaking voice, the level peaks in the yellow area around -12 dB. If, when you speak, your input levels indicator flashes in the red zone, then you are either too close to the microphone or your volume levels are set too high. Set a level by reading the first paragraph of your script while adjusting the blue circular "L" and "R" sliders (because we are working with a mono microphone tick the "Link L + R" box in the bottom l-h corner of the Input Levels window should be checked). These control your input volume (as do the sliders on the mixing desk) and it is likely that your final position for them will be towards the r-h end of the L and R slider.

g) To commence recording, click the red "Record" button in the Timeline window and start speaking. To stop recording hit the "Stop" button.

h) Speak up and don't mumble. Try always to imagine that, instead of the microphone being your only audience, someone else is there in the room with you, someone whose attention you have to engage. Remember, you are *telling* this story, not merely reading a script.

Don't worry about making "fluffs"—mistakes—as you speak. Just stop talking but leave Sound Studio running and, when you are ready, start again from the top of the paragraph or the beginning of the sentence. Few people, even professionals, accomplish their voice-over in a perfect "take", most need to have several goes at it. The errors can be removed and the damage repaired by editing later. So just keep talking until you are happy that one-way-or-another, you have recorded at least one good take for every part of the script.

i) Record some "atmos". Even very quiet rooms have *some* ambient noise so, before you finish, be sure to record some atmospheric sound. Just leave Sound Studio running for 15 seconds or so and record the quiet. You might need this later to plug spaces in your voice track.

j) As soon as you click the Stop button, a "waveform" appears in your Timeline, a squiggly line of peaks and troughs that gives you a visual rendition of your voice recording. This, as you will appreciate in due course, is a useful aid when it comes to editing. If the peaks and troughs are too shallow then you probably have your levels set a bit low and you will have to set them again (as at "f" above) and do the recording again. To listen to what has been recorded, put your headphones on and click the "Play" button in the Timeline window. Your screen now should look something like this (see over):
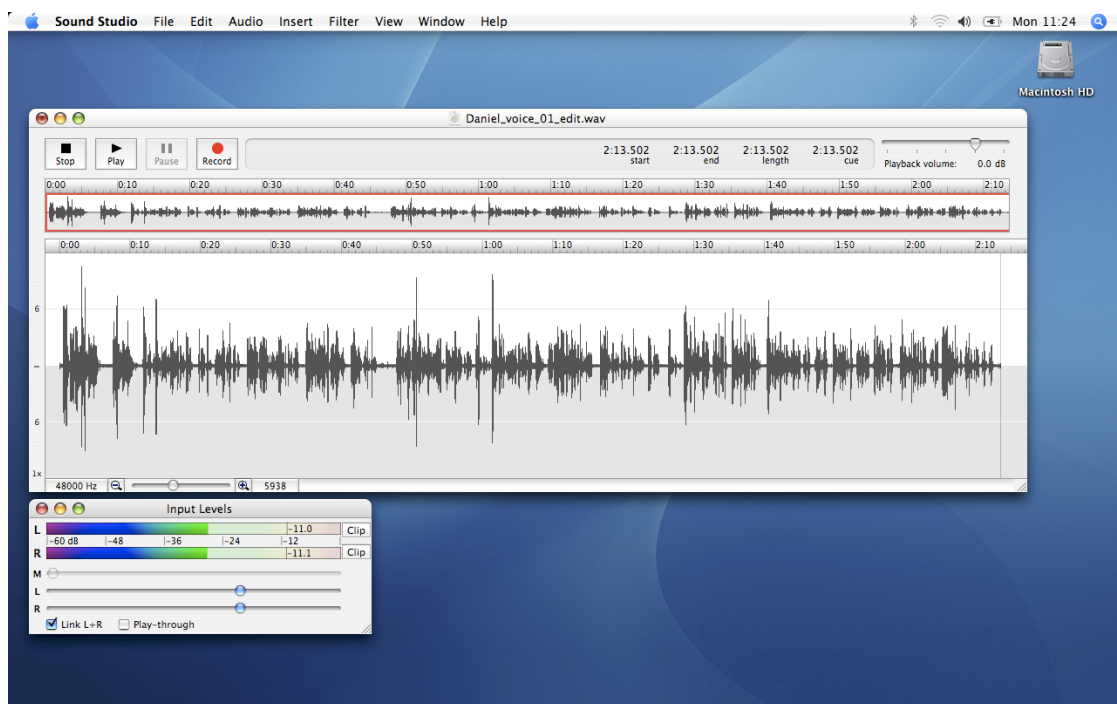
k) Save two copies: an original and a "cutting copy" as follows in 6 below. Use ".wav" as the file type.

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6. Editing an Audio Track Using Sound Studio 2.2.4

i. <u>Making a Cutting Copy</u>: As soon as you have made a recording you are happy with, save it and also save a copy of it so that there is always an "original" to which you can return if you make a mistake. Go up to the menubar and do a FILE > SAVE. Then do a SAVE AS, this time naming the file "name_voice_01_edit.wav". This is your cutting copy and you will find that it is already open on your screen.

ii. <u>Normalize</u>: If your original recording was a little bit quiet it is sometimes possible to improve it by "normalizing" it. This will bring the volume of your audio as high as it can go without being distorted. To normalize first do an EDIT > SELECT ALL. Then go to FILTER > NORMALIZE. In the Normalize window the default setting is 0.0 dB (decibels). Change this to -1.0 dB, select the "Normalize all tracks together" button and click OK. Wait a short while for the process to conclude.

iii. <u>To Begin Editing</u>: If your voice track is highlighted (blue) this means that all of it is selected. To deselect it, click your pointer at the l-h end (i.e. the start) of the Timeline. This will set the cursor/playhead flashing. Indeed anywhere you click on the centre line of the Timeline will start the cursor flashing. A flashing cursor means the track can be played.

The best way to start and stop playing the track is not to hit the Play button in the Timeline, but to hit the spacebar. Hit it once to start it playing and once again to stop it playing. In order to execute a careful edit, you should zoom-in on the track by

clicking on the "+" magnifying-glass icon at the bottom of the Timeline. To zoom-out again just hit the "-" magnifying-glass icon. To remove an unwanted piece of the track, highlight it by clicking in the Timeline at the place where you want the edit to start and then, with the shift key held down, click the cursor/playhead on the exact place in the Timeline where you want the edit to end. With the cut thus highlighted (blue) hit the backspace key (top right of your main keyboard), and that part of the voice recording will simply disappear. If you don't like the result then you can do an EDIT > UNDO DELETE and have another go.

At first the process of editing in this way is a bit tricky because it seems difficult to be certain precisely what it is that you are deleting. However, when you realise that—having highlighted a selection—you then see/hear that selection and only that selection when you hit the spacebar, things become easier. Now, if you want to adjust the "in" and/or "out" points of your highlighted edit, all you have to do is hold down the shift key while selecting (by clicking the cursor/playhead) a new "in" or "out" point and the highlighted section will be extended or reduced accordingly. In this way it is possible to be very precise in the way you make your cuts and insertions. Remember, if you make a mistake, you can always do an EDIT > UNDO.

iv. <u>To Make an Insertion</u>: Inevitably you will need to be able to cut out parts of a recording and insert them elsewhere in the Timeline. This you do by highlighting a selection in the track—click at the in-point of the edit and drag through to the out-point of the edit—and then copying or cutting it. Then do a paste. The steps here are exactly the same way as when you move sentences and paragraphs around the screen during word processing… that is by going EDIT > COPY or EDIT > CUT and EDIT > PASTE.

v. <u>To Add an Effect</u>: Under FILTER in the menubar there are many effects you might want to play with. But don't. Apart from Normalize (see ii above) only two of these effects are worth learning: AMPLIFY VOLUME and REVERB. Amplify Volume allows you to select all or part of the voice-over and make it louder or quieter. Reverb allows you to add some echo to a voice, something which is useful when want to whistle or sing (it makes you sound a lot better!).

vi. <u>Saving Your Voice-over</u>: When you are satisfied with your edit, do a SAVE AS. Save the voice-over as a .wav file and call it "firstname_vo_final.wav" in the "voice-over" folder inside your "named" folder. Go SOUND STUDIO > QUIT SOUND STUDIO.

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7. Preparing Your Pictures

i. <u>Video Formats and Aspect Ratios</u>: If you are working in the USA or Japan your Digital Video (DV) format is NTSC which stands for Never The Same Colour. (Joke. Actually it's National Television Standards Committee). If you are working in Europe, Africa, the Middle East, China or Australia then your DV format is PAL (Phase Alternating Line).

Your choice of format will affect the size at which you need to prepare photographs for working in iMovie HD. On this workshop we will work in PAL 4:3 aspect ratio (not widescreen) to produce work of broadcast quality suitable for exporting to DVD.

ii. Working in iPhoto: iMovie HD works in tandem with iPhoto, another of the iLife '06 software offerings. Open iPhoto from the Dock.
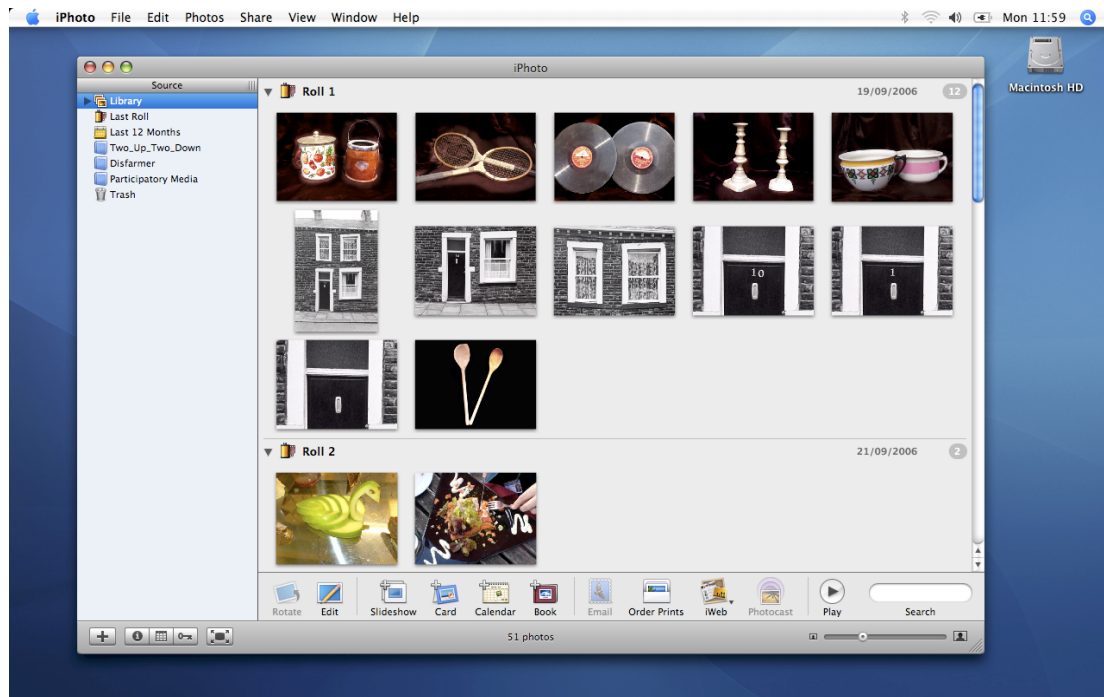
Any pictures you intend including in your story must first be imported to iPhoto. iPhoto can handle most picture file formats including Photoshop, PICT, JPEG, TIFF and PDF. But don't use GIF files because their colour rendition is limited.

As iPhoto imports your pictures, it creates its own file structure, starting each new batch as a numbered and dated film "roll". Don't worry about this strange reversion to the analogue world, just let it do its stuff.

Before you import your pictures to iPhoto you will need to decide whether or not you want them to fill the movie screen. If pictures fill the screen then the viewer has the illusion of being IN the scene. If the image is "letter boxed" or "pillar boxed" as here…
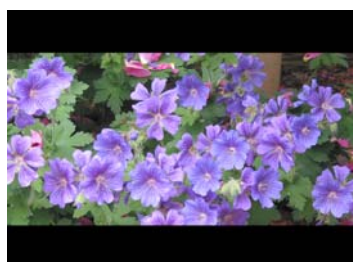
letter box image   pillar box image

…then the viewer is given the impression of looking AT the screen. So ask yourself: "Which of these illusions is the one I want?"

iii. Picture Sources: Pictures can be imported straight into iPhoto from a folder (FILE > IMPORT TO LIBRARY) or from one or other of the following sources using a USB cable or (where enabled) Bluetooth.

a) *From a Digital Stills Camera or Mobile Telephone*: If using a USB cable it will be one that is specific to your particular camera or telephone and will have been supplied with it. (If you are using a JOMEC camera, make sure you book its USB cable out of the stores at the time you collect the camera.) With the camera or phone set to "playback" or "transfer" and the cable plugged into the computer's USB port, open iPhoto and do what it tells you.

Pictures from digital cameras are usually already in a 4:3 aspect ratio and, if they were shot using one of the higher resolution modes (to produce a file size, in ".tif" format, of 5 MB or larger) then you will need to do no more.

If you are using pictures which are not in 4:3 aspect ratio, then iPhoto will *automatically* pillar box or letter box them. If you want to use vertically orientated "portrait" shots (that is tall, thin pictures) in your story then be sure to rotate them in iPhoto so that they are the right way up.

b) *From a Scanner:* The MacBook is able to work with most USB scanners. Plug the scanner into the USB port and, from the Dock, select the Image Capture software. Use this to handle the scanning process.

Most scanners allow you to size your pictures precisely; so, if you are intending to fill the screen with your images—as opposed to letter boxing or pillar boxing them—then it is important that your cropping and sizing is 100% accurate… so take note. The widths and heights of photographs in a computer are measured in pixels (picture elements or "px") and the number of "dots" (pixels) per inch (dpi) needs to be no more than 72 as the screen can only show you 72 dpi. (Note: your pictures will not appear any sharper if you screen them from high resolution scans.) The NTSC picture format in iMovie HD is 720 px wide by 528 px high. **The PAL picture format in iMovie HD is 788 px wide by 576 px high**.[1] However, when we "zoom-in" on a picture, it will look fuzzy unless we make our originals bigger than the minimum size. It is therefore a good idea to double the minimum size for all the stills you intend using as follows:

NTSC: 1440 px wide, 1056 px high, 72 dpi
PAL: 1576 px wide, 1152 px high, 72 dpi (this is the one to use).

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[1] There's some weird maths associated with these figures, I know, much of it resulting from the difference between the pixel shapes of still images (square) and the pixel shapes of digital video images (rectangular). If the figures here don't always look 4:3 to you, well they don't look 4:3 to me either. Just have faith… they do work.

Scan each image in RGB mode (even black & white pictures) so that—neatly cropped—each one produces a file of about 5 MB. Save your pictures as "best quality" JPEGs (".jpg" files) or, preferably, TIFFs (".tif" files).

c) *From Image Handling Software (like Photoshop)[2]*: If you are originating images in Photoshop, save them as TIFFs (".tif" files) at 1440 x 1056 px (NTSC users) or **1576 x 1152 px** (PAL users), and **72 dpi**. Photoshop is particularly useful in Digital Storytelling when you need to create titles or credits where text has to be precisely positioned over a picture (something that cannot be done accurately using iMovie HD's titling tool).

Note: It's good to retain any layer structure of a picture you have originated in Photoshop as you may need to make adjustments to it later.

iv. Cropping a picture in iPhoto: If you want to crop an image you can do this by using iPhoto's crop tool. But first make a copy of it (it's always a good idea to keep an original of every asset which you want to crop or edit). Do this by clicking once on its thumbnail to select it (blue border) and then going PHOTOS > DUPLICATE.

To crop a picture so that the resulting image completely fills the iMovie HD screen, do as follows. In iPhoto, double click the thumbnail version of your picture so that it opens and fills the window. Locate the "Constrain" option button in the button bar at the bottom of the window and select "Custom". A "Custom Constrain" window opens at the top of the screen. Type 1440 x 1056 (NTSC users) or **1576 x 1152** (PAL users) into the "custom constrain" box and then click-drag the crop tool over the part of the picture you want to retain. To expand or contract the border of the crop, click-drag your selection from its corner (your cursor becomes a + when you do this). To reposition your crop selection, point the cursor at its middle (the cursor becomes a hand at this point) and click-drag it. If you change your mind about the crop you have made and you want to deselect it, click in the window somewhere outside of the crop selection. To execute the crop, click the blue "Crop" button in the button bar at the bottom of the window. To undo a crop, go EDIT > UNDO CROP PHOTO. To return to the library of pictures in iPhoto, click the "Done" button in the button bar at the bottom of the window.

vi. Adjusting the quality of your images: To correct the brightness, contrast, saturation, sharpness etc. of your picture use the "Adjust" pane which is opened by clicking the black & white "ADJUST" button in the button bar (to the left of the Done button). Don't get too carried away inside the Adjust pane, it is very important that you respect the integrity of the original photograph.

vii. Creating an iPhoto "Album": When you are happy that you have finished preparing your pictures in iPhoto, create an iPhoto Album to contain them all: go FILE > NEW ALBUM. When the little window opens, type a name for your Album (your first name, your family name) and click OK. You will see that your Album is now listed in the "Source" pane to the left of the iPhoto window. Click-drag your

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[2] For a useful guide to using Adobe Photoshop Elements 2, see http://www.photobus.co.uk/dstory_pages/find.html and scroll down to 'Working In Photoshop'.

chosen thumbnail images from the iPhoto "Library" window into your Album. (They do not actually move from the Library, the Album merely references the pictures in the Library. You need to know this because, **if you delete pictures from the Library, they will also be deleted from the Album.** However, if you delete pictures from the Album, they will not be deleted from the Library.) If you now click on the Album in the Source window, it will open. To return to the thumbnails of all your other images, click on "Library" in the Source window.

viii. <u>To make a back-up of the pictures in your Album</u>: Click-drag the bottom r-h corner of the Album window and, moving it upwards and leftwards, shrink the window so that it occupies about a quarter of your screen. As the background desktop is revealed, locate the Local Folder on the desktop and, inside it, your "named" folder. Open it and double click on the "sized_images" folder. Click-drag your chosen images from your iPhoto Album into your "sized_images" folder. (Even though they appear to do so, the pictures do not actually move out of the iPhoto Library, they are just copied from it.)

Job done.

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8. Storyboard

There is not usually enough time on a short workshop to make a detailed storyboard complete with drawings but it is important that you do spend time now, marking up your script, making a note of the places in the voice-over narration where each of your pictures will appear. Also think about how long you want each picture to stay on-screen. Open your iPhoto Album to use as a reference and, once you have written down a running order for your images, click-drag your pictures into that order inside the Album.

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9. Getting Started in iMovie HD

i. <u>Creating a New Project</u>: Apple has made getting started in iMovie—anyway the first time you do it—a whole lot more difficult than it need be. So read this carefully. From the "Dock" folder, double-click the "iMovie HD" clapperboard icon. Sometimes this will open up a project which already exists, at other times a box will appear which offers you the choice between opening an existing project, creating a new project or "making a magic movie". (What?… well, exactly.) What you want is to "Create a New Project". (If, for some reason, you find yourself inside an old project, go FILE > NEW PROJECT.) Then, in the "Create Project" window, select the "Video format" you want (DV in this case) and give your project a name: e.g. "Firstname_Familyname.iMovieProject". Make sure to store your Digital Story in the "Movies" folder of your computer. Then hit the blue CREATE button. When the iMovie HD window opens, notice—at the top of the screen—that your movie is now called "Firstname_Familyname" and, in brackets, DV-NTSC or **DV-PAL**.

If you have DV-NTSC and you wanted DV-PAL (or *vice versa*) go to iMOVIE HD >
PREFERENCES > GENERAL and in the "New Project frame rate" box select the
"fps" (frames per second) that apply to the format you are using as follows: 29.97 fps
for NTSC, **25 fps for PAL**. Sadly this won't change the settings of your current
project so you will have to quit iMovie HD and start all over again. (Before you open
iMovie HD though, be sure to visit the "Movies" folder in your Hard Disk and delete
the "Firstname_Familyname" file which you have just created; drag it to the Trash
and then Empty Trash.) Okay, this is not a good start, but hopefully this will be the
last time you have to go through at least some of this maddening process as, once you
have chosen a DV format, iMovie HD will use that format as the default setting for
subsequent projects. Don't give up. From now on things start getting easier.

With iMovie HD open you will see that its screen is divided into three distinct areas,
or "panes". Here is an expanded view (see over):

Monitor   *Assets Pane*
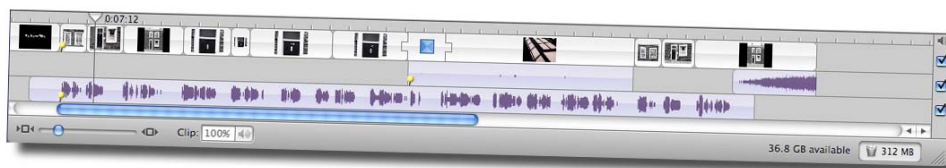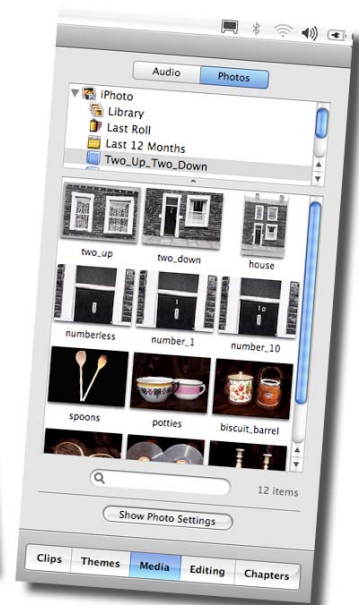
Timeline

a) *Assets Pane*: on the right of the screen is the place where we can access our
   photographs and sounds (and any video clips). It is also the place where we
   find the transitions and effects that we can apply to these assets once we have
   dragged them into the Timeline.

   Here we are also offered the chance to impose one of a number of stylistic
   "Themes" on our movie; *not* something we should do (too few themes, too
   many of our stories will look the same, too many creative decisions are left to

the people who designed the software). We can also elect to break our movie up into chapters prior to burning it onto a DVD (again *not* a useful feature for Digital Storytellers… at two minutes long, our movies are simply not long enough to need this feature.)

b) *Timeline*: here we import our audio track and then drag our photographs (and any video clips), apply transitions and effects so that, when played, the voice and the pictures synchronise. Pictures can be dragged from the Assets Pane into the uppermost track, sounds are dragged into one or other of the two lower tracks.

c) *Monitor*: this is where we view the Digital Story as it comes together.

As it happens, Apple designers have made the monitor unnecessarily large and, sadly, given us no means of shrinking it. Also, the space it takes up leaves very little room for the Timeline which is where we do most of our work. (If you didn't need spectacles before you started making Digital Stories with iMovie HD, you sure will need them once you get going. Joke.)

ii. <u>Capturing Video</u>: If you have some video which you want to include in your Digital Story, now is the time to capture it from your DV camera. Connect your DV camera to the computer with a Firewire cable. Mostly Firewire camera cables have a four-pin plug at one end—which goes into the camera's "DV in/out" socket—and a six-pin plug at the other end which goes into the computer's Firewire socket (Firewire's defining symbol looks like a radioactive "Y", on a MacBook the Firewire socket is on the l-h side of the machine, next to the USB ports). Turn the camera on and select the VTR mode. In the iMovie HD window do the following:

a) Choose the "camera" option of the "mode" switch; it's beneath the monitor and allows you to select a camera mode or a "scissors" (trimming) mode—it looks like this:

Make sure the slider is at the left, facing the camera and not the scissors. You often have to click it twice (not a double-click) to make it work. At this point the monitor will appear blue with the words "Camera Connected" written across the screen in white. Also written, in the top r-h corner, is the timecode of the tape that is currently loaded into your camera.

b) Notice that, in the Assets Pane, the "clips" button is now also selected. It looks like this:
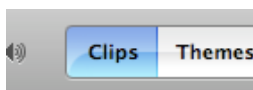
Above the clips button the Assets Pane is divided into a series of boxes, each one of which can hold a clip. Note: as iMovie HD imports your clips it will detect where a "scene-change" has occurred (a scene-change is when you stopped filming and then started filming again), at each of these intersections it will create a fresh clip, putting each one in a new box. This should not concern Digital Storytellers too much since we use very little (if any) video and so, for the most part, our clips will not be long enough to include any scene changes.

c) Click the "Play" arrow symbol of the playback controls (beneath the word "Import"). The tape will play and its pictures and sound will play in iMovie HD as well as in the camera's monitor. Start importing a few seconds before the bit you actually need. As the footage you want approaches, click "Import". The video then plays in the monitor and the clip you want loads in one of the boxes of the clips pane. If you miss the start point of your clip, don't worry, just use the rewind (and/or forward) button to navigate your way around the tape and start importing again. If you accidentally import a clip you don't want to use, you can delete it by highlighting it in the clips pane and then hitting the backspace key.

d) When you have played through to the end of the desired clip hit the "Stop" button (at the left of the Play arrow) which looks like this:

Again "leave it long", that is let the tape play for a few seconds beyond the place where you want the clip to stop.

e) In the Assets Pane (which is now showing in its "Clips" mode), click on the newly made clip. Often when you do this an "updating files" box appears with a notice telling you to wait. Be patient. A little time must pass while iMovie HD digests the clip you have just fed it.

f) Rename the imported clip with a name you will recognize. Just click where it says "Clip 01" (or whatever) and write "dog jumps" (or whatever). Always name your clips.

iii. Importing Audio: When assembling our Digital Story in iMovie HD we always begin by importing our audio to one of the two Timeline audio tracks, then we line up pictures or clips of video in the video track so that they match what is being said by the voice, and then we add effects and transitions to make our story an elegant expression of what we mean. To import audio we do the following:

a) Select the editing mode: in iMovie HD we can choose between editing in a "Clips Viewer" or a "Timeline Viewer". The Clips Viewer (which hides the audio track) is a leftover from previous versions of iMovie and isn't really

useful. Mostly we use the Timeline Viewer. The button to select it looks like this:

Click on the clock which is the symbol for "edit your work in the Timeline Viewer".

b) Go FILE > IMPORT and, from your "named" folder on the desktop, select the file "firstname_vo_final.wav" (that is your voice-over recording) and click OPEN. iMovie HD then shows you a progress box in which you can watch the import taking place.

c) The import over, now look at your Timeline and you will see iMovie HD gradually absorbing your audio track. A pale purple strip has appeared in the lower of the two audio tracks and, as you watch, the out-of-focus waveform in it slowly darkens to a deep purple, sharpening all the while.

This is your voice track:
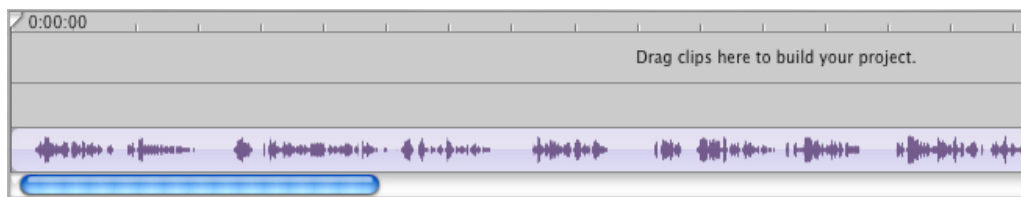
The audio waveform is a visual representation of the clip's sound. If the audio waveform appears shallow, not well defined, you can adjust its appearance by first clicking on the clip to select it so that it goes a deep purple. (Indeed *all* clips go deep purple when selected. To *deselect* a clip, click anywhere *except* on the clip… on the grey iMovie HD background is probably best.) Now hit the "page up" or "page down" keys on your keyboard (on a Apple keyboard these are the arrowed keys in the lower part of the panel to the left of your number pad). The "up" arrow makes the waveform grow, the "down" arrow makes it shrink.

To hear your voice-over play, all you have to do is hit the spacebar on your keyboard. Hit the spacebar to start playing the track, hit it again to stop playing the track. As the clip plays, the Playhead (a vertical line with a white paddle-shaped pointer at its top) moves from left to right in the Timeline. You can skip along the Timeline to another part of the clip by clicking in the Playhead Track which looks like this:
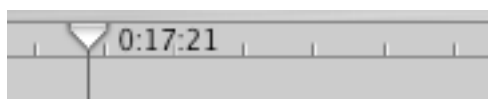
The Playhead will instantly jump to where you have clicked.

To view your Timeline from a distance or to zoom-in on any part of it, use the "Zoom Slider" at bottom left of your window which looks like this:

To zoom-in on your Timeline, move the Zoom Slider from left to right. To zoom-out (that is, to get further away so that you can see more of, or all of, the clip in the Timeline) move the Zoom slider right to left. Note that the Timeline always centres itself on the position where you have placed the Playhead.

If your audio sounds quiet when played, then adjust the volume control on your keyboard (or APPLE > SYSTEM PREFERENCES > SOUND and then adjust the "Output volume" control). If it still sounds quiet then adjust the volume control in iMovie HD by using the slider:

If the volume is *still* quiet then it was probably recorded at too low a level. But don't worry, you can make it up to 150% louder by selecting the audio clip (it's deep purple when selected remember) and then use the "Clip:" button at the bottom of the window to adjust it. Click on the speaker ◄ symbol thus:

As you use the slider to adjust the volume, note that the horizontal volume-level line (aka "the rubber band") temporarily appears on the clip. This is something that makes it possible to selectively change the volume for different parts of an audio track. Just now, all you need is to know that this is possible… you won't need to use the rubber band until later (see page 31).

d) Do a FILE > SAVE PROJECT.

10. Editing in iMovie HD

i. <u>Making a Title Sequence</u>: All Digital Stories need a title that runs for six seconds at the beginning; it fades in, holds for five seconds and then fades out. iMovie HD provides many preformatted styles for titles but, just now, we will opt for something traditional. (Note: you may find later that you have some time on your hands and, if then you want to have a go at changing the way your titles look, you should. There are 20 available formats many of them with multiple variations. But please don't waste time doing this now; ultimately your creativity will be measured by the way you tell your story, not by how pretty the title sequence looks.)

So, begin by going to the Timeline and—in the Playhead track—move the Playhead until it is at the 0:06:00 mark (zero minutes, six seconds and zero frames). Note: it's a good idea to "move in" a bit closer on your Timeline now, using the Zoom Slider in combination with the big blue horizontal scrolling lozenge at the bottom of the screen.

If you find it hard to hit the exact 6 seconds spot, then get the Playhead as close as you can with the mouse and use the left "home" and right "end" arrow keys on your keyboard to move it one frame at a time forwards or backwards.

The reason for moving the Playhead to 0:06:00 is so that we can arrange for the Titles to be up on the screen for six seconds before the voice-over starts to play.

iMovie HD has a gadget to help you align clips in the Timeline, it's called the "Snap" feature. To turn it on go iMOVIE HD > PREFERENCES and, under GENERAL, tick the box labelled "Snap to items in Timeline". You can, if you want, also tick the box labelled "Play sound effects when snapping". What Snapping does is give the clip you are moving a "magnetic" attraction to the Playhead, to the last (or first) frame of other clips in the Timeline and also to places in the audio track where a sound starts or stops. With Snap turned on you will find that it is easier to make sure that all your clips bond with each other and leave no unwanted gaps (known as "flash frames") between clips.

So click-select the voice-over clip and, pointing in the middle of the clip (not at its edge) click-drag it along the Timeline until you reach the place where the start of the speaking voice comes to rest just after the ghosted Playhead position at 0:06:00. (Note in the following graphic that I have click-dragged the voice-over clip from the lower to the higher of the two audio tracks… just to show that it doesn't matter which one it occupies. It'll work just as well in either.)
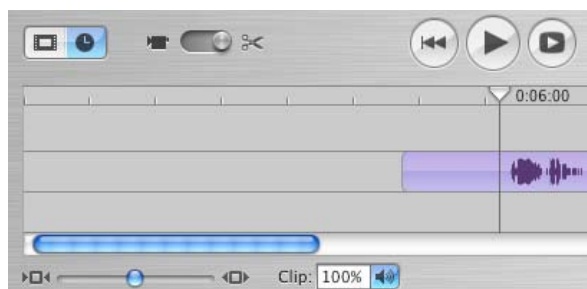
First Note: <u>Dragging and "Edge Dragging"</u>. You can only move a clip along the Timeline by dragging in its middle, that is anywhere but on its end. If you try to grab a clip by its end, your cursor will change shape to enable Edge Dragging, allowing you to lengthen or shorten the amount of time for which a clip plays in the Timeline. (IMPORTANT: Edge Dragging does not work if you have audio levels switched on, that's the rubber band I mentioned earlier. To switch the rubber band on/off go VIEW > SHOW CLIP VOLUME LEVELS. For more on the rubber band see xii below on page 31.) The shape into which the cursor turns when you attempt an Edge Drag indicates in which direction that clip can be lengthened or shortened. For example, if you place your cursor at the start of your voice-over audio clip, which has no unused sound ahead of it, it becomes an arrow that points to the right, indicating that the only way Edge Dragging could affect the clip would be to shorten it, that is, to clip off the first words spoken—not something you want to do.

At this stage, then, Edge Dragging is not useful. Later, though, particularly when you start working with stills and video clips, Edge Dragging will come into its own. (See 10.iii "Working with pictures in the Timeline", pages 23-26.)

Second Note: "<u>Ghosted" Playhead</u>. The moment you begin dragging the audio clip, the Playhead will jump to the start of the clip and stick there, moving along with the clip as you drag. However, a ghost of the Playhead remains at the 6 seconds marker to help you line-up your clip at the precise place where you want it to start playing. Learning to use the Playhead in tandem with its ghost like this is the key to lining-up all your clips in the Timeline whether they be still pictures, video or audio.

Okay, now set the Playhead at the beginning (l-h end) of the Timeline on 0:00:00 seconds and we can get on with making some Titles to fill the first 6 seconds of our movie:

a) <u>Titles Button</u>: the "Titles" button is reached by clicking on the "Editing" button at the bottom of the Assets Pane. The Titles button is at the top left of the Assets Pane, click it.
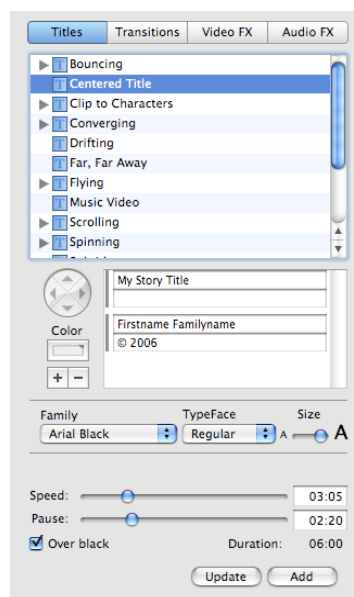
Now, from the menu of possible title styles, choose "Centered Title".

b) <u>Text Boxes</u>: In the middle of the Assets Pane there are two pairs of narrow white Text Boxes. The default text is "My Great Movie by test user Starring Me". The wheel beside the Text Boxes allows you to set the direction an animated title will move. To the left of the boxes there is also a "Color" box (it opens the "Colors" palette if you click it) as well as a "+" and a "–" button. Hit the "+" or "-" buttons to create or delete text boxes.

c) <u>Controls</u>: The functions of the controls here are mostly self-evident. Two, though, are puzzling: "Speed" and "Pause".

Speed and *Pause* determine the way the Title appears and disappears. Generally Speed indicates the amount of time for which your chosen effect applies while Pause indicates the amount of time for which the words are on the screen. The trick is to play with the combination so that the effect is pleasing to the eye and the total duration of (a sum of the time generated by the two sliders combined) does not exceed 6 secs. So, in this case, the Speed slider is showing 3 secs. and 5 frames, the Pause slider is showing with 2 secs. and 20 frames, giving a combined total of 5 secs and 25 frames (which, there being 25 frames in every second) makes 6 seconds… a figure which is shown at the bottom right of the Assets Pane, just above the "Add" button..

Set out the Assets Pane so that it looks like the picture above.

The only difference between this example and your own title pane should be that, instead of the words "My Story Title" and "Firstname Familyname" you should write your own title and name. By the way, the copyright symbol "©" is made by holding down the "alt" key and hitting a "G".

When you are happy that you have created your title correctly, click on the "Add" button .

In the Timeline the Title clip will now develop a thin, dark red line which slowly fills up from the left with a brighter red strip. Your Title sequence is "rendering", that is turning itself into a video clip. Allow it to complete this process before proceeding.

If, when the rendering is over, you find that the Title does not play as you want, make adjustments to the relevant buttons and/or sliders in the Titles window of the Assets Pane and then click the "Update" button.

When you are happy, do a FILE > SAVE PROJECT.

ii. <u>Adding Pictures to the Timeline</u>: Clicking the "Media" button in the Assets Pane gives you access to both your audio files (from iTunes) and your photographs (from iPhoto). Click on the "Photos" button at the top of the Assets Pane and then—from the list of picture rolls and Albums in iPhoto displayed in the upper white panel—

select the named Album which you created earlier. The pictures themselves appear in the lower white panel while, at the bottom r-h corner of the Assets Pane, a grey counter tells you how many pictures you have accessed.
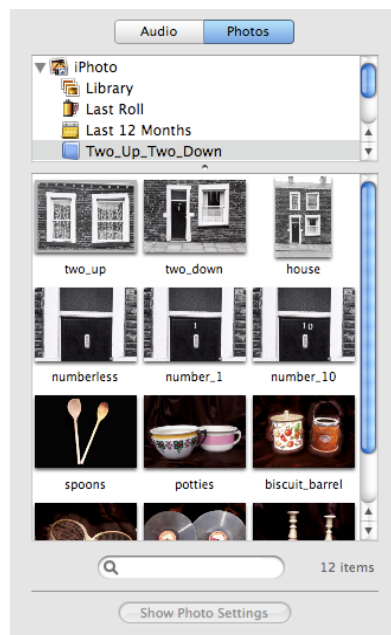
As soon as you click on a picture to select it, the "Photo Settings" box appears. Here you will find a tool called the "Ken Burns Effect". Make sure this effect is turned off (that is, the Ken Burns Effect box should *not* be checked).

(In case you're wondering who Ken Burns is, he is one of America's most respected documentary film-makers, famed especially for using a moving camera to explore still photographs in multi-part TV series like *The Civil War* (1990), *Baseball* (1994) and *Jazz* (2001). Apple designers have given his name to the facility they have invented which enables us to apply motion to a still image on the screen; that is to zoom-in and zoom-out of a picture, or pan across a picture. The Ken Burns Effect is very useful but, like all effects and transitions, it is something we apply to *some* of our pictures only and, that is, *after* we have moved them *all* to the Timeline. In other words, not yet. See 10.vi on page 27.)

Before you start dragging pictures to the Timeline, do the following:

a) Photo Settings sliders. Numerical values to control the extent to which a picture is cropped and also a clip's duration in the Timeline, are set using the two sliders in the Photo Settings window: the "Crop" slider above—the one with the small and bigger pictures of a head in a box—and the "Tortoise and the Hare" slider below.

At this stage it's a good idea to apply values to your pictures which will enable you to see them easily in the Timeline (too short and you'll find it difficult to select them, too long and they'll extend beyond the viewing area of the Timeline). Once they are *in* the Timeline, though, you will Edge Drag each picture separately to fit with the voice track, extending or shortening the time for which it plays.

To set these values type "1.00" into the Crop slider box (which tells iMovie HD that you want to see all of the picture and not just a cropped piece of it), then hit the Enter key (or the Carriage Return key) on your keyboard. Now type "2:00"—yes, it's a colon not a full stop—into the Tortoise and the Hare box (which tells iMovie HD that you want it to give it a duration of two seconds) and hit the Enter key (or the Carriage Return key) again.

Note: Don't do it now but if you were to click the "Apply" button, the selected picture will be "imported" to the Timeline. For now, though, it is probably best if we click-drag them from the Photos Pane into the Timeline.

So, referring to the storyboard version of your script which you marked up in step 8 (above), start dragging your pictures into the Timeline.

Note: Snap feature. You may or may not want to leave the Snap feature on during this process. Personally I prefer to turn it off during this "rough-cut" stage of the story-making process. Go iMOVIE HD > PREFERENCES and then, with "General" selected, uncheck the "Snap to items in Timeline" box.

iii. Working with pictures in the Timeline: As you click-drag a picture from the Assets Pane to the Timeline, its ghost-image attaches itself to the end of your cursor accompanied, first, by a red "1" symbol (to indicate that you are moving just one picture) and then, as it crosses into the Timeline, a green "+" symbol (to indicate that you are adding it to your story). When you release the mouse, an "Importing Files" progress window opens at the top of the screen indicating that it is taking iMovie HD a little time to catch up. Wait until this window has closed before you start making adjustments to the "clip" (as we must learn to call pictures now that they have been copied into the Timeline).

The first thing you will notice is that your clip is selected (dark blue) and that the Playhead has moved to the l-h end of the clip ready to play it. Hit the spacebar and you will see the clip, and only the clip, play in the Timeline accompanied by your voice-over. To see your title sequence play *as well as* the new clip, first *deselect* the clip by clicking anywhere on iMovie HD's grey background, then click-drag the

Playhead to the place from where you want to start viewing your story; hit the spacebar. To stop it playing hit the spacebar again.

Immediately you will see that, although your newly imported clip begins in the correct place, it doesn't necessarily end just where it should. You need to stretch it out or shrink it by Edge Dragging. (Remember, Edge Dragging cannot happen if you have audio levels turned on. To switch audio levels off go VIEW > SHOW CLIP VOLUME LEVELS.)

To shrink or stretch a selected clip, grab the Playhead and move it to the place on the Timeline where you would like the clip to finish and a fresh picture to appear. Now—gently—move your cursor towards the r-h end of the clip… and notice that, as you cross the edge of it, the cursor turns into a bracket with arrows on it. You can now click and Edge Drag the clip to stretch it out or shrink it (change its duration). Notice that the moment you start the move, the Playhead leaps to the position of your cursor, leaving a ghosted image of itself in the place at which you want the clip to end. If you have the Snap feature turned on, the stretching/shrinking edge of the clip will snap to the Playhead as though drawn there by a magnet.

Now go up to the Assets Pane to select your second picture. Notice in the Photo Settings box that the Tortoise and the Hare slider is still set at "2:00" and so, unless you change it, the new picture's duration in the Timeline will be two seconds.

Now drag your second picture into the Timeline and make the necessary adjustments as before.

Repeat this process until all your pictures are in the right place in the Timeline.

Some notes:

a) <u>Undo Command</u>: Remember that, if you make a mistake, you can always do a EDIT > UNDO. Also, each subsequent UNDO undoes one-at-a-time every step you have performed since the last time you saved your project.

b) <u>Deleting Clips</u>: If you insert the wrong picture into the Timeline or you change your mind about which picture should be there, you can delete it (from the Timeline that is but not, thankfully, from your Album in the Assets Pane) by clicking on it to select it and then hitting the Backspace key. It disappears (literally) in a puff of smoke! If, however, the unwanted picture forms part of a sequence of clips in the Timeline with other picture clips either side of it, then—**before deleting**—read on…

c) <u>The Ripple Effect</u>: When you have several picture clips in the Timeline there will, no doubt, come a moment when want to delete some of them or change your mind about the duration for which one or more of them plays. **Before taking any action study this next instruction carefully.**

If, for example, you highlight a clip from the middle of the track with the intention of shortening it and then move the cursor to its r-h end to begin a

leftwards Edge Drag, you will see that the cursor turns into a bracket with two arrows on it, one pointing to the right, the other pointing to the left. If you now Edge Drag to shorten this clip, the following clips start moving leftwards in the Timeline to fill the gap, with the effect that your story is thrown completely out of sync. Aaagh! All the following clips—which you have spent so much time carefully lining up with your voice-over—now no longer play in their right relationship to the audio track.

This is called the Ripple Effect and it's *very bad news*. It is a distinctly linear way for non-linear editing software to behave and it is, by a long way, iMovie's weakest feature.

Just as bad is the fact that the Ripple Effect also occurs if you try to shorten a clip in the middle of a sequence of clips by Edge Dragging it's l-h end towards the right: things *seem* to be going well as you start the Edge Drag but the moment you let go of the mouse everything in the Timeline—that is, everything to the right of the shortened clip—moves to the left. Again Aaagh!

Fortunately there's a workaround…

To prevent the Ripple Effect you can create a temporary space between the selected clip and its following (or previous) clips by Edge Dragging with the "Apple" (or "Command") key held down. A grey space then opens up between the clips and, fortunately, everything else stays where it should. But watch out! For, if you are a little over enthusiastic and hit the clip to the left of the one you are shrinking, it will stretch—a bit like shunting spongy wagons on a railway track.

Now, if you want, you can make the space you have created between the clips into a blank black clip. You do this by Control-clicking (or right-clicking if you're using a two-button mouse) inside the space between the clips and, when the shortcut menu appears, select CONVERT EMPTY SPACE TO CLIP. If subsequently you decide to change the colour of this clip, double-click on it in the Timeline and the CLIP INFO window will open. Here you can click COLOR to open the COLOR PICKER and so choose a new colour for your blank clip.

d) <u>Save Project</u>: It is customary for computer users to do a FILE > SAVE and to do it often. However, this is not always good practice when using iMovie HD for, when you go FILE > SAVE PROJECT, the UNDO memory is automatically wiped. (Another big design fault.) So only go SAVE PROJECT when you are sure that you do will not need to go EDIT > UNDO for some recent edits.

e) <u>Trash</u>: You can open the Trash to retrieve trimmed and/or deleted Timeline clips by double-clicking on the Trash icon at the bottom r-h corner of the iMovie HD window. Generally it's best not to empty the Trash unless you are short of file space as the FILE > EMPTY TRASH command also deletes the

UNDO/REDO memory. *Note*: iMovie HD Trash is not the same the Trash which lives on the computer's Dock.

     f) <u>Drag Selecting</u>: To select a number of adjacent clips in the Timeline simultaneously, position the cursor in the grey area outside the clips and drag it through the clips you want to select. Clips inside the shape you drag—or clips touched by the dragged shape—then appear to be selected. In fact Drag Selecting like this selects only clips that are in the same track. To select audio and picture clips together so that you can move the whole story along the track (to enable, say, a video clip to be inserted before the opening titles) you must first make sure that the audio track/s (that is all of them if you have more than one) are locked to the picture tracks in the relevant place. Do this by moving the Playhead to the first place on the Timeline where the sound and pictures are in sync (usually at the first clip following the title sequence) and then go ADVANCED > LOCK AUDIO CLIP AT PLAYHEAD. Two little yellow pins appear in the Timeline. Do this for all of your audio clips and now, when you do a Drag Selection, you will be able to move the whole story, pictures and sound, without fear that any of your clips will slip out of sync.

iv. <u>Adding Video Clips to the Timeline</u>: Earlier we imported some video from a DV camera ("Capturing Video" pages 15 and 16). If you did this, you can now click on the Clips button in the Assets Pane to see your video clip/s. To add a video clip to the Timeline you click-drag it from the Assets Pane in just the same way as you move still pictures… except for one thing. When you drag a photo to the Timeline, iMovie HD *copies* it there from iPhoto leaving the original untouched. But, when you bring video into the Timeline, you move the *actual clip* from the Clips Pane. This means that, because clips which remain in the Assets Pane are clips you have *not* used, you might—in the inevitable excitement of editing—lose track of just how many video clips you have at your disposal. For this reason it makes sense always to *copy* clips from the Assets Pane to the Timeline rather than merely *move* them there. iMovie HD allows you to do this if you hold down the "Alt" key while dragging the video clip from the Assets Pane. Once in the Timeline you can trim a clip's beginning and/or its end (that is, set "in" and "out" points) by Edge Dragging.

v. <u>Working with Video Clips in the Timeline</u>:

     a) <u>Extracting audio</u>: Video, of course, always brings sound with it. Often this is a sound you don't need in your story. To remove the sound from a video clip in the Timeline you must first select the clip, then go ADVANCE > EXTRACT AUDIO. As the audio is extracted it is placed into the audio track immediately beneath the video clip. If this track is already occupied, the extracted audio clip will be pasted *over* the existing audio clip. It will also be pinned to the video clip with two yellow pins to keep it in sync. So long as the extracted audio is selected, you can delete it by hitting the backspace key (the clip and its pins will then disappear) but first, if there is a vacant audio track, it is probably best to drag the selected audio clip there, just so that you can be certain you are not deleting the wrong piece of audio.

Note: if you want to keep a video clip's audio but change the volume so that it doesn't drown your voice-over, you must extract it first and then use the "Clip:" slider at the bottom of the iMovie HD window to make the necessary adjustment (see page 18).

b) <u>Adding Effects to a video clip</u>: This is not usually necessary (or even desirable) but, occasionally, it helps to be able to adjust Brightness and Contrast, slow a clip down, speed it up, sharpen it or reverse it. If you need to do any of these things then first select the clip in the Timeline, then click on the Editing button in the Assets Pane and then (at the top of the Pane) the "Video FX" button. Choose the effect you want by clicking on it. Adjustments made using the various sliders can then be previewed in the Monitor window. When you are happy with the effect you have created, hit the "Apply" button and watch the clip render in the Timeline (developing a dark red line which slowly fills up from the left with a brighter red strip).

Warning: when effects other than Brightness and Contrast, Fast/Slow/Reverse or Sharpen are chosen, iMovie HD will once again put out an automatic call to the taste police (joke).

vi. <u>The Ken Burns Effect</u>: This is the tool which allows us to zoom-in on a photograph, or pan around it.

a) <u>Zooming</u>: The trick when zooming is to practise restraint. A 2.00 magnification is mostly a bit extreme. A 1.50 magnification is plenty for most purposes.

First, in the Timeline, select the clip to which you want to apply a zoom. With the clip highlighted, click on the Media button in the Assets Pane, select Photos (at the top, not Audio) and click the "Show Photo Settings" button (at the bottom). The Photo Settings box opens. This time you *do* check the Ken Burns Effect box to turn it on. Immediately the monitor will begin to play a preview to show you how the combined settings in the two sliders (above the My Album pop-up menu) will impact on your picture. Ignore these settings (they are merely the last settings that were applied).

Notice that to the right of the words "Ken Burns Effect" there is a "Start" and "End" slider with a little metallic circle in the middle of it. Switch off the Preview by clicking the "play" arrow in the Monitor window and. Move the metallic circle to the l-h end of the slider next to the word "Start". For a zoom-in you will need to set the magnification slider (the one with a little head at one end and a big head at the other) to 1.00, that is at its l-h end. Now go back to the circular metallic slider and click inside it alongside the word "End". This allows you to set the end position of your zoom, so drag the magnification slider to the right until the Preview monitor shows you the crop that you want.

But be careful: do not change the values in The Tortoise and the Hare slider. This is showing you the existing duration of the clip and, if you make a change

to it, then everything in the Timeline to the right of your selected clip will go out of sync and the result will be a big mess.

Now press the Preview button in the monitor window and the zooming-in effect will play in the Preview monitor. If you like what you see, click the "Update" button in the Photo Settings box (or click the big tick in the Monitor window slider) and watch the clip render in the Timeline (developing a dark red line which slowly fills up from the left with a brighter red strip).

b) Panning: Panning is the general term used to describe a lateral move on a picture. When you make your Start and End positions in the Ken Burns Effect, you will notice that you can also move the image around by placing the cursor over the image in the Monitor window where it turns into a hand which, when you click, makes a grabbing gesture. By click-dragging the hand you can move the picture around inside the Preview monitor and choose an off-centre Start or End position. You want to zoom in on a group photo to draw attention to a particular face at one end of the line? Well this is how you do it.

vii. Splitting a Clip: There is no Razor Blade tool in iMovie HD. If you want to divide a clip and shorten it by deleting a part of it, rather than Edge Dragging it, you can place the Playhead at the place where you want to make the cut and go EDIT > SPLIT VIDEO AT PLAYHEAD. Then you can select the part you want to remove and delete it but… watch out for the Ripple Effect.

viii. Restoring a Video Clip: It is sometimes possible to lose your way with a video clip. You've got it in the Timeline but you forgot to hold down the alt key when you dragged it from the Clips Pane so there is no copy, and now you wish you hadn't messed about with it quite so much because you'd like to start with it all over again. Well, you can. If you select it in the Timeline and go ADVANCED > REVERT CLIP TO ORIGINAL it will do just that. But beware: this is not an operation which can be undone.

ix. Using Transitions: Up till now all our changes between clips in the picture track have been "cuts", that is, we jump from one picture to the next. However, if we want, we can use Transitions and thereby move more gently between clips.

In the Timeline, drag the Playhead to the "clip boundary" (the place where two clips meet) at the exact place where you would like to insert a Transition. Select Editing in the Assets Pane and (at the top of the screen) choose "Transitions".

The Transitions pane offers you a selection of 16 different Transitions starting with "Billow" and ending with "Wash out". If you click on these one-at-a-time (just one click), what each does is demonstrated in the Monitor window. Don't get too excited though, mostly they are all just more cases for the taste police and anyway, time spent experimenting here is time wasted as, particularly for those of us working with still pictures rather than video clips, most of the Transitions are completely useless. This is because, when inserted in the Timeline, they become parasites, stealing time from adjoining clips in order to make themselves work, with the inevitable result that everything in the track from the point of insertion goes out of sync.

There is, however, some good news; five of the Transitions do *not* behave destructively and these are the five that we can use:

a) "Overlap": this we use instead of the more conventional "Cross Dissolve". The outgoing clip freezes on its final frame while the new clip fades in.

b) "Fade In": this affects only the clip to its right creating a fade-in from black.

c) "Fade Out": this affects only the clip to its left and creates a fade-out to black.

d) "Wash In": this affects only the clip to its right creating a fade in from white.

e) "Wash Out": this affects only the clip to its left and creates a fade out to white.

Before you can use a Transition you must first select it from the list in the Assets Pane and then set a duration for it. You select it by clicking on its name (it will go blue). You set a duration for it either by adjusting the "Speed" slider in the Assets Pane or by highlighting the numbers which appear in the bottom r-h corner (above the word "Add") and then typing the duration required, like this: 01:13 (which means the Transition will take place over one second and thirteen frames). Every time you move the Speed slider the Transition will preview in the monitor.

There are two ways to get your Transition into the Timeline: you can drag it there (grab hold of its name in the Assets Pane) or, having set a duration for it, click the Add button.

When placed in the Timeline, the Transition must first render (developing a dark red line which slowly fills up from the left with a brighter red strip) before you can hit the spacebar to see its effect on the clip to which it has been applied. If you don't like the way it looks, you can either go EDIT > UNDO or click on the Transition in the Timeline and hit backspace to delete it.

Note: you can ignore the Direction Control (circle with the four arrows on it in the Transitions Pane) as it works only with "Billow" and "Push", Transitions we don't use.

x. Editing the Audio Track: Sometimes it is necessary to edit an audio track. At the moment the only audio track we have in the Timeline is the voice-over and we edited that in Sound Studio so we know it's good. Oh yes? Well, now that we've heard it in the context of the pictures it might be that we think it would be better to tighten up a pause here, or give a phrase there a bit more air. Here's how to make such adjustments.

a) Splitting the Audio Track: In the Timeline, select the audio clip you want to adjust and move the Playhead to precisely the place on it where you want to make the adjustment. Go EDIT > SPLIT SELECTED AUDIO CLIP AT PLAYHEAD. A cut appears in the audio clip, effectively creating two clips where before there was only one. You can now use Edge Dragging to shrink

either one; or you can delete a clip by selecting it and then hitting the spacebar. If you do make a deletion in this way and then, at a later stage, wish you hadn't, it doesn't matter because you can use Edge Dragging to pull at the severed end of the remaining clip and literally "pull out" the piece you thought you had deleted… it was there all the time!

b) Inserting "Atmos": If you listen carefully to the gaps in a voice-over track—the spaces between the words and phrases—you will discover that you never hear complete silence. Voice-over tracks always bring with them a certain amount of atmospheric sound. Known as atmos, it's a kind of background hum or hiss. If you split an audio track and insert a pause by dragging one half of the clip away from the other, you will create a dead space of complete silence in the playback and it will sound odd because the atmos is missing. To put this right, find a pause somewhere else in the voice-track, split the track in front of it and again after it, go EDIT > COPY to copy your selection to the computer's clipboard and then move the Playhead back to the position on the voice-track where you want to fill the silence with atmos and go EDIT > PASTE. iMovie HD then pastes the atmos over the gap in the track. More than likely the piece of atmos you just pasted will be too long for the gap it needs to fill, so click-drag the pasted clip into the—as yet unused—second audio track immediately below the gap, and Edge Drag it to fit. Then return it to the gap in the voice-over track. Job done.

xi. Adding additional Audio: Sound effects and music can be useful when it comes to creating mood… but be careful with your choice. Inappropriate sound effects can spoil your work and remember, your *favourite* tune is invariably someone else's *least* favourite tune. Popular tunes carry associations, most of which are peculiar to the listener. A poor choice of music will steer the attention of your audience away from your story. So be very careful with what you choose and *never* use other people's material without their permission, and their publisher's permission. If you use music without these permissions then you are in breach of the copyright laws and you should expect to be pursued as a thief.

So, rather than use music someone else has made, you should consider creating your own. If you aren't musical (is there anyone out there who *never* hums a tune or whistles one occasionally?) then work with a friend who is. Remember, this is a *scrapbook* aesthetic we are observing. We do it ourselves. All of it.

If you absolutely *can't* manage without including commercial music then iMovie HD makes it easy for you to access some. All you have to do is click the Media button in the Assets Pane and then select the Audio button at the top of that Pane. Here you can choose to view your whole iTunes Library or any particular playlist within it. (iTunes comes as part of iLife '06.) From this pop-up menu you can also choose to preview a selection of ready-made "Standard Sound Effects", "Skywalker Sound Effects" or "iLife Sound Effects". For the time being, though, we'll stick with the iTunes Library.

a) Importing Music: in the iTunes Library click a music track to select it. To hear it, hit the circular "play" button (the one with the black triangle on it).

When you are happy that you have chosen the tune you want, click-drag it into the Timeline.

In fact you can import a music track from elsewhere on your computer in just the same way as you imported your voice-over track on page 16. iMovie HD recognises .wav, .aif, .mp3 file types and AAC files.

Once a music track is in the Timeline you can adjust its volume by using the "Clip:" slider. You can edit it using the methods described in "x" on page 29.

b) <u>Sound Effects</u>: To search for an effect in the Assets Pane, first choose the source from which you want to access it: Standard, Skywalker or iLife. iLife Sound Effects provide the widest range of sounds. Search either by scrolling or by typing a keyword (like "crowd") into the search box at the bottom of the Assets Pane. To hear an effect, select it and then either double-click or hit the arrowed "play" button. When you are happy that you have chosen the right sound effect and are ready to place it in the Timeline, make sure your Playhead is positioned at the place where you want the sound effect to start and then click on the "Place at Playhead" button.

xii. <u>Selectively Adjusting Audio Levels in the Timeline to balance the Soundtrack</u>: To "mix" the audio tracks so that sounds from different clips do not drown one-another out, you can selectively and independently adjust their volumes. Select a track you wish to adjust, then go VIEW > SHOW CLIP VOLUMES. Now place the Playhead at the place where you want the volume to change and, using the Zoom slider, move in close.

With the Clip Volumes showing you will see that a horizontal volume-level line (aka "the rubber band") has appeared on every audio clip. When you click on this line you create a small yellow handle. Drag that handle up (louder) or down (quieter), left (earlier) or right (later), and the rubber band bends. Pretty soon the rubber band also develops a little purple square and this too can be moved around.
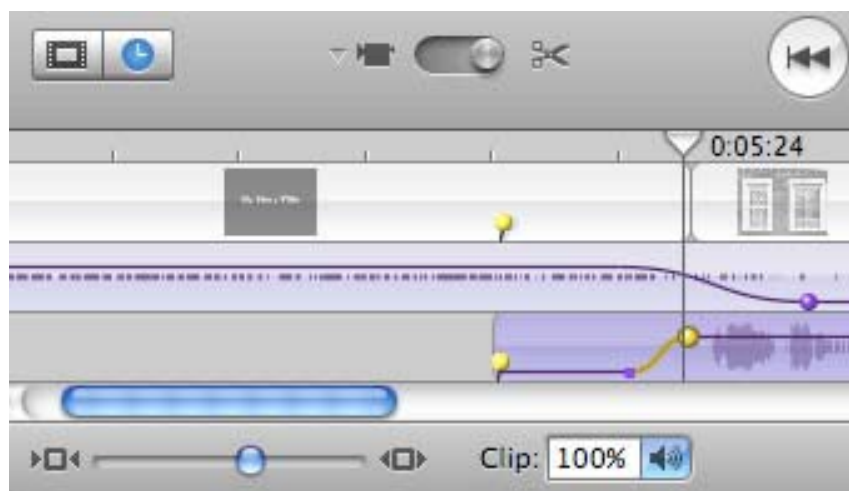
The relative positions of the yellow handle and the purple square determine the speed with which a change in volume takes place. Useful to note here is that the volume

percentages in the "Clip:" indicator change as the yellow handle is moved. This helps you compare and match the various volumes of any number of the handles you create as you go about balancing the audio clips in your Timeline.

To remove a volume handle either click it and then hit the backspace key, or drag it back to its original 100% setting. It will disappear and the rubber band will snap back into line. What's clever is that you can add handles and adjust volumes *while the movie is playing*.

If you want to turn off one audio track while you adjust the volume in another, go to the r-h end of the Timeline Viewer and uncheck the relevant tickbox like this:

When you have finished adjusting volumes in as many of your clips that need it and all the sound plays so that it can be heard as you want it to be heard, go VIEW > SHOW CLIP VOLUME LEVELS to turn off the command. iMovie HD will remember all your adjustments.

Go FILE > SAVE PROJECT.

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12. Viewing Your Finished Story

i. <u>Play Full-screen</u>: Position your cursor at the start of the Timeline and click on the "view clips in full-screen mode" button (the r-h of the three circular buttons under the main monitor).

Your Digital Story will play edge-to-edge on your computer monitor. If you need to interrupt the screening, hit the esc key ("escape", top left on your keyboard) and you will return to the main iMovie HD window.

ii. <u>Output Your Story to Tape</u>: Ultimately you will need to back-up your story away from the computer, where it is taking up a lot of room. The best way to archive your story is on DVD (see 12 below) and this is where Macs with inbuilt DVD burners come into their own. Another good way to store it is to output it to a tape from which it can also be viewed on a TV screen. One of the bonuses of working in digital video is that you can play a story out to DV tape and then, if you want, reimport it to the computer without losing any quality. Here are the steps for outputting your story to tape:

a) Put a blank tape in your DV camera.

b) Switch on the DV camera in VTR mode and plug its Firewire cable into your computer.

c) With your project open in iMovie HD, go FILE > EXPORT. A dialogue box appears. At the top you can choose between output methods: Videocamera, QuickTime, eMail, Bluetooth, iDVD, iPod, iWeb, GarageBand. Choose Videocamera and decide how many "seconds of black" you would like to have before and after your story plays. Two seconds at the beginning and one second at the end is recommended. Do *not* tick the "Share selected clips only" box.

d) Hit the "Share" button. Sometimes at this point iMovie HD tells you "Your movie contains still, slow motion, and/or reverse clips which need to be rendered for export to iDVD or tape." If so, click "Render and Proceed".

iMovie HD remotely controls your DV camera so that the tape rolls and, in real-time, your story is copied to tape. When the process is over, reset the mode switch to the camera position like this:

This tells iMovie HD that you are resuming control. Unplug the Firewire cable and, if you want, view your story on your DV camera. With the Firewire unplugged you can now return to the Timeline view by moving the mode switch to the scissors position.

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13. Archiving Your Finished Story on DVD

Without doubt one of the best things about creating your story in a Mac using iLife '06 is the smooth integration between iMovie HD and iDVD. And what's *really* clever is that, when you are ready to archive your project, you can produce a disk

which, when it is inserted into a DVD player, automatically plays your story and *also*—in the background—contains your entire iMovie HD project so that, if later you want to revisit it and make alterations, all you have to do is insert the disk into a computer, copy your project icon from the DVD to the hard disk, reopen your story in iMovie HD and get to work.

So, here is how to make a DVD of your Digital Story (or indeed any movie project made using iMovie HD:

i. <u>Preparing to Export</u>. With your project open in iMovie HD, go FILE > EXPORT. A dialogue box appears. At the top you can choose between output destinations. Choose QuickTime. In the pop-up selection box choose "Full Quality" and then hit the "Share" button. What you are about to do is make a top quality data version of your finished story in a form that can be readily copied between computer programmes and disks.

ii. <u>Naming your Shared File</u>. The "Save" window opens asking you to name your file and put it somewhere. Call it "Firstname_Familyname.dv" and put it in your named folder in the Local Folder on the desktop. Hit the "Save" button. The "Compressing Movie" progress box opens and its little rectangular box slowly fills with blue from left to right. When this process is complete, go FILE > SAVE PROJECT.

While you are at it you might as well make a second QuickTime version of your Digital Story. This will be a cheap-and-cheerful version, smaller in file size than the "Full Quality" .dv file you have just made, one that you can copy quickly to a friend's computer using a USB pendrive or a CD-ROM and one that will play on low-powered machines without juddering. To do this follow step i. above but, instead of choosing "Full Quality" in the Share Dialogue Box, use the pop-up to select "Expert Settings". When you hit the "Share" button the "Save exported file as…" window will appear. From here navigate to your named file on the desktop and, in the "Save As:" box type:

"Firstname_Familyname_320x240.mov".

In the "Export" pop-up at the bottom of the window choose "Movie to QuickTime Movie" and hit the "Options" button. The "Standard Video Compression Settings" window opens. Here you can navigate inside the "Compression Type" and "Motion", "Quality" and "Data Rate" panes as you choose. Recommended settings are: Compression Type: H.264; Frame Rate: 25 fps (unless you are working in NTSC in which case you should use 30 fps); Key Frames every 5 frames; Frame Reordering; Compressor Quality: High; Encoding: Best Quality (Multi-pass); Data Rate: Restrict to 460 kbits/sec; Optimized for: CD/DVD-ROM; Click OK. The Movie Settings window appears.

Click the "Size…" button and select 320 x 240 QVGA and click OK. The Movie Settings window appears again.

In the "Sound" pane click the "Settings" button and select as follows: Format: IMA 4:1; Channels: Mono; Rate: 44.100 kHz; Render Settings: Normal. Click OK.

Your Movie Settings window (PAL users) should now look like this:
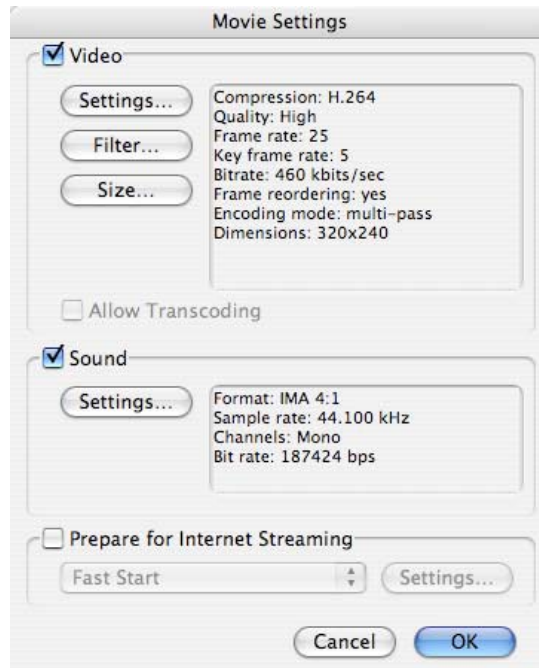
Click "OK". You return to the "Save exported file as…" window where you can now hit "Save". The "Compressing movie" progress box appears. In a couple of minutes (or less) the job is done.

Go iMOVIE HD > QUIT iMOVIE HD.

iii. <u>Getting started in iDVD</u>. From your Applications folder (or the dock), locate and open iDVD. If the first thing to appear is a dialogue box offering you the chance to "Create a New Project", then click it. If not, then the iDVD window which does appear is very likely the last iDVD project that someone created using this computer. If this happens, ignore it and go FILE > NEW.

iv. <u>Naming your iDVD project</u>. A dialogue window will open requiring you to name your iDVD project and to put it somewhere. Name it "Firstname_Familyname_DVD" and save it to your named folder inside the Local Folder on the desktop. It will also ask you to choose between 4:3 aspect ratio and widescreen. Choose 4:3.

v. <u>Getting shot of the Apple</u>. An Apple logo may hover in the bottom r-h corner of the iDVD screen.

(This logo was designed in memory of Alan Turing, 1912-1954, the legendary English WW2 code breaker at Bletchley Park. In 1946 he wrote what is now generally agreed to have been the spec the first modern computer. Following a

conviction in 1952 for violating the homosexuality laws, he committed suicide by taking a bite out of an apple contaminated with potassium cyanide. In the early 1980s Apple engineers decided to honour his genius by having their logo designed as an apple with a bite out of it; or so the story goes.)

However, Alan Turing or no Alan Turing, we really do not want Apple's branding on our work so, to get rid of the apple, go iDVD > PREFERENCES… > GENERAL and, in "Project Settings", uncheck the "Show Apple logo watermark" box.

vi. <u>Customising your DVD</u>. With the main iDVD window open, turn off the "Motion" button (man walking symbol). White is off, blue is on. (If Motion is switched on, sounds and moving pictures play and, at this stage, that's all a bit distracting).

To the right of the monitor window there is an assets pane, just like in iMovie HD. Click on the "Themes" button at the bottom left of the pane and a series of design themes becomes available. They have names like "6.0 Themes", "Old Themes" and "Favorites". Again mostly these are just another case for the taste police.

In the name of restraint and simplicity we shall adapt one of these Themes. The one I suggest we use is located in the "Old Themes" portfolio, it's called "Projector". I like this only for the simplicity of its typography. (The projector image has to go, I'm afraid.) Click on it and it will appear in the monitor.

Hide the projector by replacing it with a still picture. If you don't have a still picture you like enough then make one in PhotoShop (size 768 x 756 px). A plain black works well enough I find. Create your image and then drag it into iPhoto. Then, from within iDVD, click the "Media" button. From the top of the Media pane select "Photos" and a window opens into your iPhoto library. Locate your background picture (or plain black image) and click-drag it over to the monitor window to cover up the image of the picture of the projector.

To delete a still picture from the Monitor window, click-drag it onto the desktop and, when you release the mouse, it will disappear in a cloud of smoke.

To stop the sound of the projector from playing, hit the "Menu" button and, using the slider at the top of the Menu pane, set the "Loop Duration" to 00:00.

vii. <u>Finding the Text Safe Area</u>. Go VIEW > SHOW TV SAFE AREA. A red border appears on your iDVD window. This marks the space inside of which any text you might want to write on your menu, or any buttons you are going to place there, must be placed. Any object placed outside this red line will be invisible to viewers of at least some TV screens. By now *your* screen should look something like this:
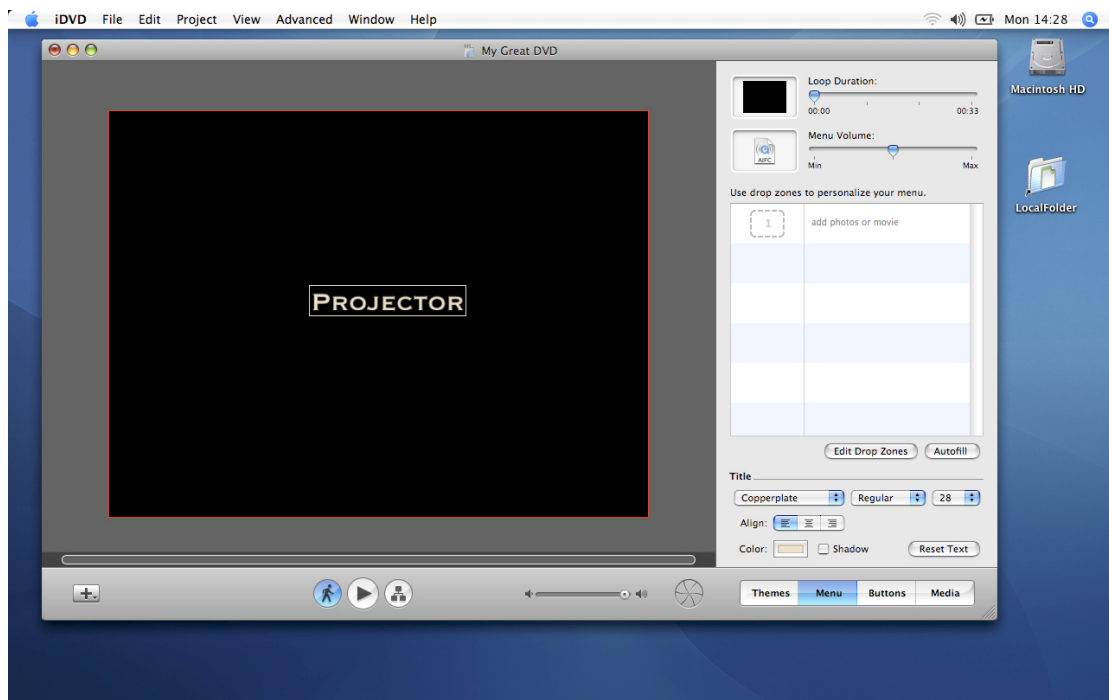
viii. <u>Creating an on-screen Title for your Digital Story</u>. Double-click on the words "Projector" to select them and then hit the delete key (or backspace) to delete them.

Now click on the screen (anywhere) to make that residual little blue text box disappear. Go PROJECT > ADD TEXT and the words "CLICK TO EDIT" appear on your iDVD window. Move your cursor over the words and it'll turn into a hand. Click and a yellow text box appears around the words. Click once in the box and then type your title.

When you are happy with what you have written, click away from the box to deselect the text and you will now find that you can click-drag the title to move it around the screen. Position it so that all the words of your title fall inside the TV safe area (red boundary).

ix. <u>Adjusting the size of your Title</u>. Hit the Menu button and, using the font controls (currently set to Copperplate, Regular, and 28) make some adjustments. E.g. you might decide to stick with Copperplate as your font but to give it a finer line by selecting "Light" instead of Regular while at the same time making it larger by choosing, say, "48" as the font size. You will then, most likely, need to click-drag your Title in the Monitor window to reposition it.

x. <u>Importing your Digital Story to iDVD</u>. Grab hold of your iDVD window by click-dragging in the grey title area at the top. Behind the window, on the desktop, you should be able to locate the Local Folder. Double-click the folder to open it and find the "Firstname_Familyname.dv" file which you created in 12.ii above.

Drag this .dv file from the desktop into the TV Safe Area of your iDVD project window and release the mouse ("drag and drop"). Notice that two things have happened instantaneously: you have imported your Digital Story to your iDVD project and you have created a Menu "Button" for it. (Buttons have a star next to them. Red is the default colour for stars but you can change the colour if you have the Button button selected by clicking on the "Highlight Color" box and selecting a new colour from the pop-up palette.)

Click the "Buttons" button and, in the pane, select "Free Positioning". You can now click drag your button to reposition it inside the Monitor window. If you want to change the button's name, double-click to highlight it and then type in a new name.

When you are happy with the arrangement of the Title and the Menu Button, go VIEW > HIDE TV SAFE AREA and the red box will disappear.

xi. <u>Setting a Transition</u>. To set an elegant Transition for what happens when you eventually press the Menu button, select the Button button and then locate the "Transition" menu. Choose "Fade Through Black" (ignore the others.)

xii. <u>Archiving your iMovie project</u>. This is the really clever part. When this is done you will not only have a DVD to play but, on the same disk, you will also have an archive of all the project files which you have used in the making of your Digital Story.

If you get into the habit of always making your DVDs this way, you'll never again be nervous about deleting old iMovie HD projects to make space on your hard disk. From now on you will be able, at any time you want, to revisit all the projects you have made in iMovie HD from your archive of DVDs.

So, go ADVANCED > EDIT DVD-ROM CONTENTS. In the "DVD-ROM Contents" window click the "Add Files…" button. Navigate to your "Firstname_Familyname" iMovie Project in the "Movies" folder of your computer. Select it and click "Open". Now navigate to your desktop and select your "Firstname_Familyname" folder and click "Open". Nothing, of course, actually opens… but the selected files are now referred to in the "DVD-ROM Contents" window and this means that they, as well as your Digital Story, will be burnt onto you DVD. No doubt some files now listed in the DVD-ROM Contents window are files that you really do *not* want to archive on the DVD (like the icon for the iDVD project itself), so highlight them in the DVD-ROM Contents window and hit the backspace key to delete them. (Don't worry, you are not deleting the actual files, only their presence on the DVD.)

Note: The nosey among you will see that, in the "DVD-ROM Contents" window, the iMovie HD Project now appears as a folder and not a document icon. iMovie's true identity is revealed at last! Click on the little arrow to its left to open it and the inner workings of your Digital Story are revealed. These are the source files of your project which iMovie HD likes to keep hidden. They are linked to the project but hidden from you during the making process so that you

don't accidentally upset the project's file hierarchy. If, when you have completed the making of your DVD, you decide to delete your iMovie Project from the hard disk of your computer by dragging its icon to the Trash, then all the files from the hidden place will be automatically dragged there too.

When you are happy that all the files you need to archive are in the "DVD-ROM Contents" window, click the red button in its top l-h corner to close it.

Go FILE > SAVE

xiii. <u>Burning a DVD</u>. Hit the "Burn DVD" button. (The circle with six wavy triangles in it):
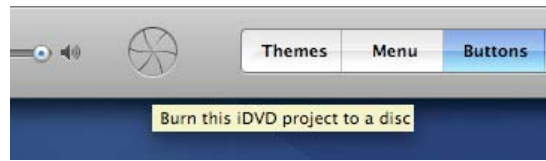
Sometimes at this stage a "Warnings in project" dialogue box appears alerting you to "problems" that need "fixing". Actually all this means, most of the time, is that iDVD doesn't like you for getting rid of one of its Themes earlier on. If you like, you can click the little arrow at the l-h side of the box to check, but, generally, you should just press on. Click the "Continue Burning" button. The machine whirrs a bit and then a new dialogue box appears asking you to "Insert a recordable DVD disc". This you should do as follows:

xiv. Take a fresh, blank DVD-R and put it in your computer's Superdrive. The Mac whirrs a bit more and then a "Creating your DVD" progress box appears. iDVD is burning your DVD. A Digital Story takes about five minutes to burn.

Have a cuppa, you've earned it.

When your computer has burned the DVD, it spits it out and quits the programme.

xv. <u>Reworking your iMovie project from a DVD archived copy</u>. Put your DVD into the Superdrive of your computer. The computer's default will probably open the DVD player and start playing your Digital Story straight away. Let it do this but go FILE > QUIT at the first opportunity. Now locate the DVD's icon on your desktop and double-click it to open it.

Inside your DVD you will see three folders: "Audio_TS", "Video_TS" (these two house the necessary files that enable your DVD to play your Digital Story), and then there's the named "DVD_ROM Contents" folder where all your source files as well as the original ".iMovieProject" file are stored.

Before attempting to work on your ".iMovieProject", first copy it to the hard disk of your computer. When copied, click once on the ".iMovieProject" icon to select it and then go FILE > GET INFO. When the "Info" box opens, navigate to

"Ownership & Permissions" and use the pop-up to select "Read & Write". Then click the little red button at the top left of the window to close it.

Now double-click the iMovie HD project file and it will open in iMovie HD. You can now begin re-editing it using all the skills that you have learned in this tutorial.

Daniel Meadows, Cardiff, October 2006.